IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	:	
Halvarsson et al.	:	Attorney Docket: 43315-214729
Application No.: 10/528,201	:	Art Unit: 2832
Filed: September 27, 2005	:	Examiner: J. Baisa

Title: AN INSTALLATION FOR TRANSMISSION OF ELECTRIC POWER

BRIEF ON APPEAL

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This brief is submitted pursuant to the notice of appeal filed November 12, 2008.

Real Party In Interest

The real party in interest in this appeal is the assignee, ABB AB, SE-721 83, Västerås, Sweden, by virtue of an assignment from the inventors to ABB AB, which was recorded in the U.S. Patent and Trademark Office on September 27, 2005, at reel 017568, frame 0180.

Related Appeals and Interferences

Applicants are unaware of any related appeals or interferences which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

The application as filed included claims 1-18. In a preliminary amendment submitted with the application, Applicants amended claims 1-18. In a response submitted January 8, 2007, to the office action issued July 12, 2006, Applicants cancelled claims 1-18 and presented claims 19-42. In a response submitted July 10, 2007, to the office action issued April 10, 2007, Applicants amended claims 19 and 29 and cancelled claim 24. In a response submitted February 8, 2008 to the office action issued October 9, 2007, Applicants amended claim 1. In the final office action issued June 12, 2008, the Examiner finally rejected claims 19-23 and 25-42. Applicants appeal the final rejection of claims 19-23 and 25-42.

Status of Amendments

Applicants have not submitted any amendments to the claims subsequent to the issuance of the final office action.

Summary of Claimed Subject Matter

The invention recited in independent claim 19 relates to an installation for transmission of electric power (page 1, lines 5-6). The installation includes two switchgear units. (*See* page 1, 6-7; page 6, lines 36-39; page 7, lines 10-12; page 9, lines 10-12; and page 10, lines 20-23.) A high-voltage ac voltage line extends between the switchgear units (page 1, lines 6-7 and 10-11; page 2, lines 22-23; page 6, line 36, through page 7, line 2). The high-voltage exceeds at least 10kV (page 1, lines 14-15). The high-voltage ac voltage line includes at least one extruded cable (page 2, lines 22-24; and page 7, lines 2-3 and 14-15) including an inner electric conductor (page 2, line 24; and page 7, lines 15-16), an insulating layer of a solid material surrounding the conductor (page 2, lines 24-25; and page 7, lines 15-17), and an outer screen layer located at ground potential (page 2, line 26; page 7, lines17-18). At least one inductor is located along the cable between the switchgear units and integrated into the at least one extruded cable. (*See* page 2, lines 27-28; and page 8, lines 18-22.) The at least one inductor is connected between the conductor of the at least one extruded cable and ground (page 2, lines 30-31; and page 8, lines 21-22). The cable is led through a casing (page 4, lines 15-19; and page 8, lines 26-28). The casing is located at ground potential (page 4, line 16-17; and page 8, lines 26-28). The at least one inductor is arranged in the casing (page 4, lines 15-19; and page 8, lines 26-28). A first end

of the at least one inductor is connected to the electric conductor. (*See* page 4, lines 15-18.) A second end of the at least one inductor is connected to the casing (page 4, lines 15-19; and page 8, lines 28-30).

As recited in claim 20, the switchgear units may be located at a large distance from each other. (*See* page 1, lines 7-8; page 6, line 39, through page 7, line 1.)

According to claim 21, the installation may include a plurality of inductors distributed along the ac voltage line (page 3, lines 33-35; and page 9, lines 5-7).

The plurality of inductors may be arranged at considerable distances from each other as recited in claim 21. (*See* page 3, lines 33-35; and page 9, lines 4-19.)

According to claim 23, the inductors may be essentially uniformly distributed along the ac voltage line (page 3, lines 35-37; and page 9, lines 5-8).

As recited in claim 25, the insulating layer may include cross-linked polyethylene. (*See* 7, lines 31-33.)

According to claim 26, the cable further may also include an inner layer arranged nearest the conductor (page 7, lines 18-20) and having an electrical conductivity that is lower than an electrical conductivity of the conductor but sufficient to cause the inner layer to act in a potential-equalizing manner to equalize the electric field externally of the inner layer, and

wherein the screen layer has an electrical conductivity that is higher than an electrical conductivity of the insulating layer to render the screen layer capable of functioning in a potential-equalizing manner, through connection to ground, and to essentially enclose an electric field that arises inside the screen layer as a result of the electric conductor. (*See* page 7, lines 18-30.)

The at least one inductor may be completely or partially buried in the ground, as recited in claim 27 (see page 10, lines 7-9).

As recited in claim 28, the cable in the vicinity of the at least one inductor may be divided into a cable part on both sides of a point of connection to the cable (page 8, lines 23-24). The installation may further include a connector for connection of the at least one inductor to the cable (page 8, lines 25-26). The connector may include three connection devices for connection of an end of an electric conductor of the cable parts to two of the connection devices and an end of the at least one inductor to a third of the connection devices (page 8, lines 25-30). A member may electrically interconnect the three connection devices (page 8, lines 30-32).

The at least one inductor may include a winding, as recited in claim 29. (*See* page 4, lines 15-16; and page 8, lines 28-29.)

According to claim 30, the at least one inductor may include an auxiliary winding for delivering auxiliary energy to a consumer (page 4, lines 21-23; and page 9, line 37, through page 10, line 2).

As recited in claim 31, the auxiliary winding may include equipment for operation of parts of the installation and communication between the parts and/or between the installation and external equipment (page 4, lines 23-26; and page 10, lines 2-5).

The installation may further include an optical fiber laid along the cable or integrated into the cable, for use of a device for at least one of protection of the installation, commercial communication within the installation or communication with the surroundings. (*See* page 4, lines 33-37; and page 9, lines 21-27.)

According to claim 33, the ac voltage line may exhibits three phases and one of the cables for each phase (page 1, line 12; page 5, lines 7-12; and page 9, lines 29-37).

Claim 34 recites that the at least one inductor may include a three-phase inductor with the cables of the respective phase connected to a separate inductor winding in a respective phase leg of a common core (page 5, lines 9-12; and page 9, lines 33-37).

As recited in claim 35, the at least one cable may be designed to have a system voltage of between 50 kV and 500 kV between the conductor and the screen layer. (*See* page 1, lines 14-16; and page 7, lines 5-6).

According to claim 36, the at least one cable may be designed to have a system voltage of between 30 kV and 300 kV between the conductor and the screen layer (page 7, line 7).

The installation may be designed for a maximum transmissible power, via the ac voltage line, of 50 MW-600 MW (page 7, line 9), as recited in claim 37.

As recited in claim 38, the distance between the switchgear units may exceed 25 km (page 1, line 28-29; page 7, lines 10-12; and page 9, lines 8-10).

According to claim 39, the installation may include at least two inductors, wherein a distance between an inductor located nearest a switchgear unit and the switchgear unit and between adjacent inductors is 5-40 km. (*See* page 9, lines 8-9.)

Claim 40 recites that the installation includes at least two inductors, wherein a distance between an inductor located nearest a switchgear unit and the switchgear unit and between adjacent inductors is 10-25 km. (*See* page 1, lines 27-29; page 7, lines 10-11; and page 9, lines 8-10.)

The inductor may dimensioned for a reactive power of 5-30 MVAR, as recited in claim 41. (*See* page 9, lines 4-5.)

According to claim 42, the installation may include at least two inductors, wherein dimensioning of the inductors and a distance between adjacent inductors and between one of the inductors and a switchgear unit, respectively, are adapted to a magnitude of a voltage that the cable is intended to carry and a shunt capacitance/unit of length of the cable to essentially eliminate capacitive currents in the cable (page 5, lines 21-27).

The claimed invention makes possible the use of an extruded cable in AC voltage lines without the need for a plurality of substations with closely located switchgear units. As a result, the claimed invention provides a much less expensive solution as compared to AC voltage lines, particularly including oil impregnated paper, and thought to be possible with extruded cables. The claimed invention also reduces disturbance of nature and living beings as compared to non-isolated overhead lines. Advantages of the claimed invention at least in part stem from the inclusion of at least one inductor in the cable. Advantages of the claimed invention are discussed in the specification at pages 2-5 of the specification.

Grounds Of Rejection To Be Reviewed On Appeal

I. The Examiner rejected claims 19-24, 26, 29-31, 33, 34, 38-40, and 42 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 3,942,100 to Kauferle et al. in view of U.S. patent 4,785,138 to Breitenbach et al. and U.S. patent 5,053,910 to Goldstein.

II. The Examiner rejected claims 25, 35, and 36 under 35 U.S.C. § 103(a) as being unpatentable over Kauferle et al. in view of Breitenbach et al. in view of U.S. patent 5,716,574 to Kawasaki.

III. The Examiner rejected claims 27 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Kauferle et al. in view of Breitenbach et al. and Goldstein and further in view of Japanese patent document JP 06-261456.

IV. The Examiner rejected claim 32 under 35 U.S.C. § 103(a) as being unpatentable over Kauferle et al. in view of Breitenbach et al. and Goldstein and further in view of European patent 0 825 465 to Johansen.

V. The Examiner rejected claims 37 and 41 under 35 U.S.C. § 103(a) as being unpatentable over Kauferle et al. in view of Breitenbach et al. and Goldstein and further in view of U.S. patent 6,441,712 to Ainsworth.

Argument

I. Claims 19-24, 26, 29-31, 33, 34, 38-40, and 42 are patentable under 35 U.S.C. § 103(a) over U.S. patent 3,942,100 to Kauferle et al. in view of U.S. patent 4,785,138 to Breitenbach et al. and U.S. patent 5,053,910 to Goldstein.

The combination of Kauferle et al., Breitenbach et al. and Goldstein does not suggest the invention recited in claim 19 since, among other things, the combination does not suggest a reactive element integrated into a transmission line. The Examiner asserts that Kauferle et al. discloses "at least one inductor **b** located along the of the cable **f** between the switchgear units and integrated into the at least one extruded cable **f**". However, Kauferle et al. does not suggest an installation where a reactive element is integrated into a transmission line. Fig. 1 of Kauferle et al. clearly shows that the main reactive element b is not integrated into the transmission line.

In fact, Kauferle et al. teaches away from the claimed invention. For example, at col. 1, lines 35-37, Kauferle et al. states, "arrangements connectable directly to the line are unable to fully limit over-voltages during start-up conditions." Additionally, at col. 1, lines 47-49, Kauferle et al. states, that an object of the invention is to provide "an improved reactive power compensator which avoids the above-mentioned disadvantages."

Kauferle et al. also clearly describe at col. 2, lines 58-66, that the main reactive element is not integrated since "excitation for the element *b* is not obtained directly from the line *f* or from a conventional distribution transformer connected to such line as in prior designs; instead, such excitation is provided by a high-voltage variable shunt reactance A having an exciting winding *a* connected in shunt with the line *f* at the junction *d*. A power winding *a'* of the shunt reactance is magnetically coupled to the exciting winding *a* and serves as the power feed for the element *b*". Kauferle et al. also does not suggest an extruded cable. In fact, the specification of Kauferle et al. does not include the word "cable" or "extruded cable". Rather, Kauferle et al. suggests a transmission line.

Moreover, Kauferle et al. does not suggest the problem of capacitive currents generated in transmission lines comprising a cable or the increase of capacitive currents with increasing length of the transmission line. Kauferle et al. suggests a reactive power compensator to solve other problems, such as instabilities in line frequency and voltage and transient overvoltages due to abrupt changes in operating conditions. A person skilled in the art would identify the problems mentioned above with long power transmission lines including a cable, which implies that the transmission line f of Kauferle et al. is not a cable but an overhead line. This feature in

connection with Fig. 1 further implies that Kauferle et al. does not disclose a reactive element that is integrated into the transmission line.

The Examiner asserts further that it would have been obvious to one having ordinary skill in the art at the time the present invention was made to combine the extruded cable suggested by Breitenbach et al. to the reactive power compensator of Kauferle et al.. Breitenbach et al. suggests an extruded cable that satisfies the requirements of a phase winding of a linear motor. According to the Examiner, the motivation to combine these references would have been due to the capability of the reactive power compensator to improve the stability of the transmission system. However, the Examiner does not explain why one of ordinary skill in the art having already improved the stability of the transmission system as suggested by Kauferle et al. would look for a solution to improve the stability even further in Breitenbach et al., which suggests two phase windings of linear motors.

Even if one of ordinary skill in the art made this modification suggested by the Examiner Breitenbach et al. does not suggest improving stability of a transmission system or increasing current handling capacity by the use of one or more inductors for reactive shunt compensation. Viewing Breitenbach et al. as a starting point, one skilled in the technical field of electric cables for phase windings of linear motors would not look for a solution to improve the stability in a transmission system and would therefore not find Kauferle et al. Even if such a person make the combination, the result would not be the invention recited in claim 19, which includes one or more inductors are integrated into the cable.

On the other hand, Goldstein suggests means for providing protection from transient voltage surges induced in coaxial cables and the like for carrying television signals from antenna systems or cable television distribution services. This is described at col. 1, lines 13-17. A surge suppression network is built into a coaxial housing 19, and includes a shunt inductor L1 shunting the center conductor at an intermediate point to the housing. This is described in the abstract and at col. 6, lines 49-52, in connection with Figs. 1, 2, 4 and 5.

The Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the coaxial housing and the inductor being arranged in the housing suggested by Goldstein with the structure suggested by Kauferle et al. in view of Breitenbach et al. According to the Examiner the motivation would have been for adjusting the reactance of the line for transmission efficiency. However, one skilled in the art of long power transmission lines including an extruded cable and reactive power compensators would not look for a solution to adjust the reactance of power transmission lines among documents concerning coaxial cables and the like which carry television signals from antenna systems. Such television signals only have a voltage level of a few volts and a coaxial cable is a cable used for transmission of electronic signals, consisting of a conducting outer metal tube insulated from a central conducting core. Even if one skilled in the art somehow looked to Goldstein for a solution to problems in power transmission lines, nothing in Goldstein suggests adjusting the reactance of a line for transmission efficiency or increased current handling capacity utilizing one or more inductors for reactive shunt compensation, which is a feature of the invention recited in claim 19.

In view of the above, the combination of Kauferle et al., Breitenbach et al., and Goldstein does not suggest the invention recited in claims 19-24, 26, 29-31, 33, 34, 38-40, and 42. Therefore, the invention recited in claims 19-24, 26, 29-31, 33, 34, 38-40, and 42 is not obvious in view of the combination of Kauferle et al., Breitenbach et al., and Goldstein. Accordingly, Applicants respectfully request reversal of this ground of rejection.

II. Claims 25, 35, and 36 are patentable under 35 U.S.C. § 103(a) over U.S. patent 3,942,100 to Kauferle et al. in view of U.S. patent 4,785,138 to Breitenbach et al. in view of U.S. patent 5,716,574 to Kawasaki.

The combination of Kauferle et al., Breitenbach et al. and Kawasaki does not suggest the invention recited in claims 25, 35, and 36, which depend from claim 19, since, among other things, Kawasaki does not overcome the above-described deficiencies of Kauferle et al. or Breitenbach et al. The Examiner only cites Kawasaki as suggesting cross-linked polyethylene. Cross-linked polyethylene does not suggest the aspects of the invention recited in claim 19 and not suggested by Kauferle et al. or Breitenbach et al. and does not provide motivation or suggestion to combine Kauferle et al. and Breitenbach et al.

In view of the above, the combination of Kauferle et al., Breitenbach et al. and Kawasaki does not suggest the invention recited in claims 25, 35, and 36. Therefore, the invention recited in claims 25, 35, and 36 is not obvious in view of the combination of Kauferle et al., Breitenbach et al. and Kawasaki. Accordingly, Applicants respectfully request reversal of this ground of rejection.

III. Claims 27 and 28 are patentable under 35 U.S.C. § 103(a) over U.S. patent 3,942,100 to Kauferle et al. in view of U.S. patent 4,785,138 to Breitenbach et al. and U.S. patent 5,053,910 to Goldstein and further in view of Japanese patent document JP 06-261456.

The combination of Kauferle et al., Breitenbach et al., Goldstein and Japanese patent document JP 06-261456 does not suggest the invention recited in claims 27 and 28, which depend from claim 19, since, among other things, Japanese patent document JP 06-261456 does not overcome the above-described deficiencies of Kauferle et al., Breitenbach et al. and Goldstein. The Examiner only cites Japanese patent document JP 06-261456 as suggesting a completely or partially buried cable. A completely or partially buried cable does not suggest the aspects of the invention recited in claim 19 and not suggested by Kauferle et al., Breitenbach et al. and Goldstein and does not provide motivation or suggestion to combine Kauferle et al., Breitenbach et al. and Goldstein.

In view of the above, the combination of Kauferle et al., Breitenbach et al., Goldstein and Japanese patent document JP 06-261456 does not suggest the invention recited in claims 27 and 28. Therefore, the invention recited in claims 27 and 28 is not obvious in view of the combination of Kauferle et al., Breitenbach et al., Goldstein and Japanese patent document JP 06-261456. Accordingly, Applicants respectfully request reversal of this ground of rejection.

IV. Claim 32 is patentable under 35 U.S.C. § 103(a) over U.S. patent 3,942,100 to Kauferle et al. in view of U.S. patent 4,785,138 to Breitenbach et al. and U.S. patent 5,053,910 to Goldstein and further in view of European patent 0 825 465 to Johansen.

The combination of Kauferle et al., Breitenbach et al., Goldstein and European patent 0 825 465 to Johansen does not suggest the invention recited in claim 32, which depends from claim 19, since, among other things, Johansen does not overcome the above-described deficiencies of Kauferle et al., Breitenbach et al. and Goldstein. The Examiner only cites Johansen as suggesting an optical fiber laid along a cable or integrated in the cable for use of a device for protection of the installation and/or commercial communication within the installation and/or with the surrounding. An optical fiber laid along a cable or integrated in the cable for use of a device for protection of the installation and/or commercial communication within the installation and/or with the surrounding do not suggest the aspects of the invention recited in claim 19 and not suggested by Kauferle et al., Breitenbach et al. and Goldstein and does not provide motivation or suggestion to combine Kauferle et al., Breitenbach et al. and Goldstein.

In view of the above, the combination of Kauferle et al., Breitenbach et al., Goldstein and Johansen does not suggest the invention recited in claim 32. Therefore, the invention recited in claim 32 is not obvious in view of the combination of Kauferle et al., Breitenbach et al., Goldstein and Johansen. Accordingly, Applicants respectfully request reversal of this ground of rejection.

V. Claims 37 and 41 are patentable under 35 U.S.C. § 103(a) over U.S. patent 3,942,100 to Kauferle et al. in view of U.S. patent 4,785,138 to Breitenbach et al. and U.S. patent 5,053,910 to Goldstein and further in view of U.S. patent 6,441,712 to Ainsworth.

The combination of Kauferle et al., Breitenbach et al., Goldstein and U.S. patent 6,441,712 to Ainsworth does not suggest the invention recited in claims 37 and 41, which depend from claim 19, since, among other things, Ainsworth does not overcome the above-described deficiencies of Kauferle et al., Breitenbach et al. and Goldstein. The Examiner only cites Ainsworth as an installation designed for a maximum transmissible power via an ac voltage line of 50 MW-600 MW and an inductor for a reactive power of 5-30 MVAR. An installation designed for a maximum transmissible power via an ac voltage line of 50 MW-600 MW and an inductor for a reactive power of 5-30 MVAR do not suggest the aspects of the invention recited in claim 19 and not suggested by Kauferle et al., Breitenbach et al., and Goldstein and does not provide motivation or suggestion to combine Kauferle et al., Breitenbach et al., and Goldstein.

In view of the above, the combination of Kauferle et al., Breitenbach et al., Goldstein and Ainsworth does not suggest the invention recited in claims 37 and 41. Therefore, the invention recited in claims 37 and 41 is not obvious in view of the combination of Kauferle et al., Breitenbach et al., Goldstein and Ainsworth. Accordingly, Applicants respectfully request reversal of this ground of rejection.

Conclusion

In view of the above, the various combinations of U.S. patent 3,942,100 to Kauferle et al., U.S. patent 4,785,138 to Breitenbach et al., U.S. patent 5,053,910 to Goldstein, U.S. patent 5,716,574 to Kawasaki, Japanese patent document JP 06-261456, European patent 0 825 465 to Johansen, and U.S. patent 6,441,712 to Ainsworth do not suggest patentable features of the claimed invention. Therefore, the various combinations of Kauferle et al., Breitenbach et al., Goldstein, Kawasaki, Japanese patent document JP 06-261456, Johansen, and Ainsworth do not make the claimed invention obvious. Accordingly, Applicants submit that the claimed invention is patentable over the various combinations of Kauferle et al., Breitenbach et al., Goldstein, Kawasaki, Japanese patent document JP 06-261456, Johansen, and Ainsworth and respectfully request reversal of the rejections and issuance of the Notice of Allowance.

The undersigned authorizes the Commissioner to charge insufficient fees and credit overpayment associated with this communication to Deposit Account No. 22-0261.

Date: March 11, 2009

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Appendix A

Claims On Appeal

19. An installation for transmission of electric power, comprising:

two switchgear units;

a high-voltage ac voltage line extending between the switchgear units, wherein the high-voltage exceeds at least 10kV, the ac voltage line comprising at least one extruded cable including an inner electric conductor, an insulating layer of a solid material surrounding said conductor, and an outer screen layer located at ground potential;

at least one inductor located along the cable between the switchgear units and integrated into the at least one extruded cable, the at least one inductor being connected between the conductor of the at least one extruded cable and ground; and

a casing through which the cable is lead, the casing being located at ground potential, and the at least one inductor being arranged in the casing, wherein a first end of the at least one inductor is connected to the electric conductor and a second end of the at least one inductor is connected to the casing.

20. The installation according to claim 19, wherein the switchgear units are located at a large distance from each other.

21. The installation according to claim 19, wherein the installation comprises a plurality of inductors distributed along the ac voltage line.

22. The installation according to claim 21, wherein the plurality of inductors are arranged at considerable distances from each other.

23. The installation according to claim 21, wherein said inductors are essentially uniformly distributed along the ac voltage line.

25. The installation according to claim 19, wherein the insulating layer comprises cross-linked polyethylene.

26. The installation according to claim 19, wherein the cable further comprises an inner layer arranged nearest the conductor and having an electrical conductivity that is lower than an electrical conductivity of the conductor but sufficient to cause the inner layer to act in a potential-equalizing manner to equalize the electric field externally of the inner layer, and wherein the screen layer has an electrical conductivity that is higher than an electrical conductivity of the insulating layer to render the screen layer capable of functioning in a potential-equalizing manner, through connection to ground, and to essentially enclose an electric field that arises inside the screen layer as a result of the electric conductor.

27. The installation according to claim 19, wherein the at least one inductor is completely or partially buried in the ground.

28. The installation according to claim 19, wherein the cable in the vicinity of the at least

one inductor is divided into a cable part on both sides of a point of connection to the cable, the installation further comprising:

connecting means for connection of the at least one inductor to the cable, the connecting means comprising three connection devices for connection of an end of an electric conductor of the cable parts to two of the connection devices and an end of the at least one inductor to a third of the connection devices; and

a member for electrically interconnecting the three connection devices.

29. The installation according to claim 19, wherein the at least one inductor comprises a winding.

30. The installation according to claim 19, wherein the at least one inductor comprises an auxiliary winding for delivering auxiliary energy to a consumer.

31. The installation according to claim 30, wherein the auxiliary winding comprises equipment for operation of parts of the installation and communication between the parts and/or between the installation and external equipment.

32. The installation according to claim 19, further comprising:

an optical fiber laid along the cable or integrated into the cable, for use of a device for at least one of protection of the installation, commercial communication within the installation or communication with the surroundings.

33. The installation according to claim 19, wherein the ac voltage line exhibits three phases and one of the cables for each phase.

34. The installation according to claim 33, wherein the at least one inductor comprises a three-phase inductor with the cables of the respective phase connected to a separate inductor winding in a respective phase leg of a common core.

35. The installation according to claim 19, wherein the at least one cable is designed to have a system voltage of between 50 kV and 500 kV between the conductor and the screen layer.

36. The installation according to claim 19, wherein the at least one cable is designed to have a system voltage of between 30 kV and 300 kV between the conductor and the screen layer.

37. The installation according to claim 19, wherein the installation is designed for a maximum transmissible power, via the ac voltage line, of 50 MW-600 MW.

38. The installation according to claim 19, wherein the distance between said switchgear units exceeds 25 km.

39. The installation according to claim 19, wherein the installation includes at least two inductors, wherein a distance between an inductor located nearest a switchgear unit and the switchgear unit and between adjacent inductors is 5-40 km.

40. The installation according to claim 19, wherein the installation includes at least two inductors, wherein a distance between an inductor located nearest a switchgear unit and the switchgear unit and between adjacent inductors is 10-25 km.

41. The installation according to claim 19, wherein said inductor is dimensioned for a reactive power of 5-30 MVAR.

42. The installation according to claim 19, wherein the installation includes at least two inductors, wherein dimensioning of the inductors and a distance between adjacent inductors and between one of the inductors and a switchgear unit, respectively, are adapted to a magnitude of a voltage that the cable is intended to carry and a shunt capacitance/unit of length of the cable to essentially eliminate capacitive currents in the cable.

Appendix B

Evidence Appendix

None

Appendix C

Related Proceedings Appendix

None